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Swanson, Greg

From: Swanson, Greg
Sent: Monday, January 27, 2003 3:15 PM
To: McGill, Preston
Cc: Wells, Doug; Aggarwal, Pravin; Hawkins, Jim
Subject: RE: external tank attach ring and fracture control

Preston,

The answer is yes, the FCB should be involved in review of fracture control of a fracture critical component that has been determined to fall short of fracture control requirements. The ET attach ring would fall into this category. Your question was well stated since the FCB would be involved with the fracture control aspects of the flight rationale, but the other aspects of the flight rationale should be reviewed by other appropriate experts. A flight rationale can consist of many factors, the FCB's function here is to ensure the fracture control issues are properly presented and, if possible, to develop an alternate fracture control rationale.

A fracture critical component that has a reduction in margin against fracture control requirements, but still meets them, would most likely be dispositioned by an MRB. The FCB is available to assist with the fracture aspects of an MR if requested, and the individual members of the FCB will assist the MRB technical representatives within their parent organizations if asked.

Greg
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ED22 Strength Analysis Group
NASA/MSFC
(256) 544-7191

-----Original Message-----

From: McGill, Preston
Sent: Thursday, January 23, 2003 5:51 PM
To: Swanson, Greg
Cc: Wells, Doug
Subject: external tank attach ring and fracture control

Greg,

David Martin, SRB chief engineer, asked me to get your opinion on whether or not the MSFC FCB should review the rationale for flight with respect to fracture control for the next ET attach ring. The attach ring is fracture critical and we currently do not meet mission life requirements based on our latest estimate of fracture toughness for the material.

Let me know what you think. I'll be glad to provide more details.

Thanks,

Preston
4-2604